

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P775941

Luminaire Tested: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B031)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K
Description: 4 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

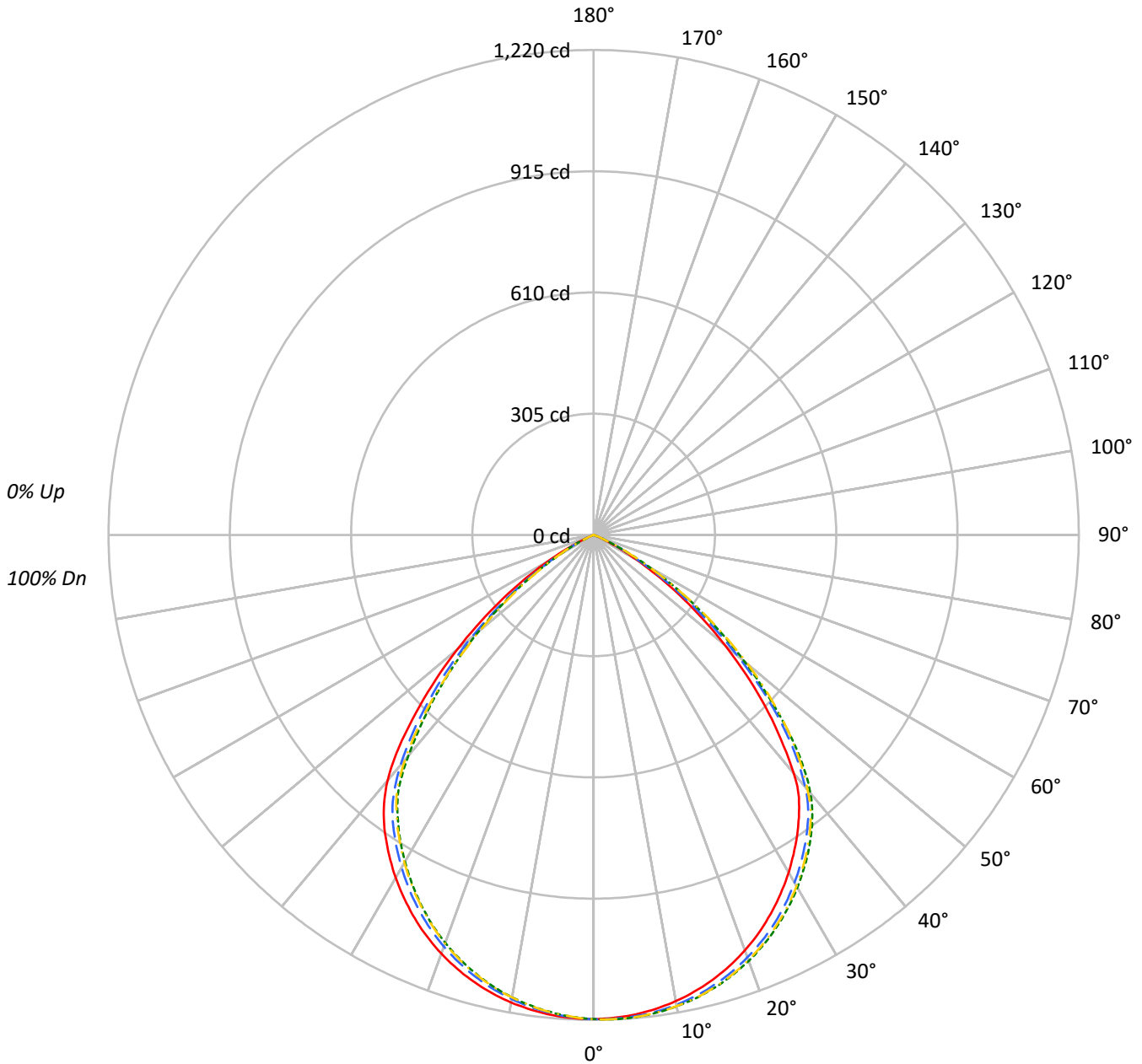
Lumens per Lamp: N/A
Luminaire Lumens: 2256.1 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.26
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P775941

CATALOG NUMBER: HCDJBLS1525CSD-HCD41TRMB-2500lm-3000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	109	106	103	109	106	104	101	102	100	98	99	97	95	95	94	92	90					90			
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81					81			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72					72			
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64					64			
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57					57			
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46					46			
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42					42			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	40	38					38			
10	60	49	42	37	59	48	41	37	47	41	37	46	41	36	45	40	36	35					35			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	153298	153298	153298	153298
5°	152948	153820	153138	152329
10°	152161	153899	152634	150934
15°	150888	153585	151657	148921
20°	148940	152743	150065	146194
25°	146122	151163	147802	142595
30°	142471	148865	144694	137878
35°	137718	145615	140560	132095
40°	128717	139314	132496	119140
45°	108567	121986	112304	97853
50°	84032	96954	87517	73773
55°	57684	69444	60558	48731
60°	31211	40926	33778	24616
65°	9559	14800	10512	6611
70°	920	993	920	920
75°	972	972	972	972
80°	870	870	725	870
85°	289	722	289	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 122948 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	5.1
10°-20°	327.3	14.5
20°-30°	486.9	21.6
30°-40°	562.7	24.9
40°-50°	474.8	21.0
50°-60°	241.6	10.7
60°-70°	45.2	2.0
70°-80°	2.0	0.1
80°-90°	0.5	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	929.2	41.2
0°-40°	1492.0	66.1
0°-60°	2208.4	97.9
0°-90°	2256.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2256.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1218	1218	1218	1218	1218	
5°	1211	1218	1212	1206	1211	115
15°	1158	1179	1164	1143	1158	326
25°	1052	1089	1064	1027	1052	484
35°	896	948	915	860	896	558
45°	610	685	631	550	610	467
55°	263	316	276	222	263	237
65°	32	50	35	22	32	42
75°	2	2	2	2	2	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1
0.5°	1217.9	1217.9	1218.4	1218.6	1218.9	1218.9	1218.9	1217.9	1217.6	1217.9	1217.6
1°	1217.6	1218.1	1218.6	1218.9	1219.1	1219.4	1219.1	1218.1	1217.6	1217.6	1217.1
1.5°	1217.1	1217.9	1218.6	1219.1	1219.1	1219.6	1219.4	1218.4	1217.4	1216.9	1216.4
2°	1216.6	1217.6	1218.4	1219.4	1219.4	1219.8	1219.6	1218.4	1217.1	1216.4	1215.4
2.5°	1215.6	1216.9	1218.1	1219.4	1219.4	1219.6	1219.1	1218.1	1216.6	1215.6	1214.7
3°	1214.9	1216.4	1217.6	1218.9	1219.4	1219.6	1219.1	1217.4	1216.1	1214.9	1213.4
3.5°	1213.9	1215.6	1217.4	1218.6	1218.9	1219.4	1219.1	1217.1	1215.2	1213.7	1212.4
4°	1213.2	1214.9	1216.6	1218.1	1218.6	1219.1	1218.6	1216.9	1214.4	1212.7	1211.2
4.5°	1211.9	1213.9	1216.1	1217.4	1218.1	1218.6	1217.9	1216.4	1213.4	1211.2	1209.5
5°	1210.7	1212.9	1215.2	1216.9	1217.6	1217.9	1217.1	1215.4	1212.2	1210.0	1208.0
5.5°	1209.2	1211.7	1214.2	1216.1	1216.6	1217.4	1216.6	1214.4	1211.2	1208.7	1206.3
6°	1207.5	1210.5	1213.4	1215.2	1215.9	1216.4	1215.6	1213.4	1209.7	1207.0	1204.5
6.5°	1205.8	1209.0	1211.9	1214.2	1214.9	1215.4	1214.4	1212.4	1208.2	1205.5	1202.8
7°	1204.3	1207.5	1210.7	1213.2	1213.7	1214.2	1213.2	1211.2	1206.5	1203.3	1200.8
7.5°	1202.3	1205.8	1209.2	1211.7	1212.2	1213.2	1211.9	1209.7	1204.8	1201.6	1198.6
8°	1200.3	1204.0	1207.7	1210.5	1211.0	1211.7	1210.5	1208.0	1202.8	1199.3	1196.4
8.5°	1198.1	1202.1	1206.0	1208.7	1209.5	1210.2	1209.0	1206.3	1200.8	1197.1	1193.9
9°	1195.6	1200.1	1204.3	1207.0	1207.7	1208.7	1207.5	1204.5	1198.8	1194.9	1191.2
9.5°	1193.2	1197.9	1202.3	1205.3	1206.0	1207.0	1205.5	1202.8	1196.9	1192.4	1188.5
10°	1190.7	1195.6	1200.1	1203.5	1204.3	1205.3	1203.8	1200.8	1194.4	1190.0	1185.7
10.5°	1188.0	1193.2	1197.9	1201.3	1202.3	1203.3	1201.6	1198.6	1191.9	1187.2	1182.8
11°	1185.3	1190.4	1195.6	1199.1	1200.1	1201.1	1199.6	1196.4	1189.5	1184.3	1179.8
11.5°	1182.5	1187.7	1193.2	1196.9	1197.9	1198.8	1197.1	1193.9	1186.7	1181.3	1176.6
12°	1179.1	1185.0	1190.4	1194.4	1195.6	1196.4	1194.9	1191.2	1183.8	1178.3	1173.1
12.5°	1176.1	1182.0	1187.7	1191.9	1193.2	1193.9	1192.2	1188.5	1180.6	1175.1	1169.7
13°	1172.7	1179.1	1184.8	1189.5	1190.4	1191.4	1189.7	1186.0	1177.6	1171.7	1166.0
13.5°	1169.4	1175.9	1181.8	1186.5	1187.7	1188.5	1186.7	1183.0	1174.4	1168.2	1162.3
14°	1165.7	1172.4	1178.8	1183.5	1184.8	1186.0	1184.0	1179.8	1170.9	1164.7	1158.6
14.5°	1162.0	1168.9	1175.4	1180.6	1181.8	1182.8	1180.8	1176.6	1167.7	1161.0	1154.4
15°	1158.1	1165.2	1171.9	1177.3	1178.8	1179.8	1177.6	1173.4	1164.0	1157.1	1150.2
15.5°	1154.1	1161.0	1168.7	1173.9	1175.6	1176.4	1174.1	1169.7	1160.3	1153.1	1146.2
16°	1149.9	1157.6	1165.0	1170.4	1172.2	1173.1	1170.7	1166.2	1156.3	1148.9	1142.0
16.5°	1145.7	1153.6	1161.0	1167.0	1168.5	1169.4	1167.2	1162.5	1152.4	1144.7	1137.3
17°	1141.5	1149.4	1157.3	1163.3	1165.0	1165.7	1163.5	1158.8	1148.2	1140.5	1132.6
17.5°	1136.8	1145.0	1153.4	1159.3	1161.0	1161.8	1159.6	1154.9	1143.7	1135.8	1127.7
18°	1131.9	1140.5	1148.9	1155.4	1157.1	1157.8	1155.6	1150.4	1139.3	1131.1	1122.7
18.5°	1127.2	1136.1	1144.5	1151.4	1152.9	1154.1	1151.4	1146.2	1135.1	1126.4	1117.8
19°	1122.2	1131.1	1140.3	1147.0	1148.9	1149.9	1147.0	1142.0	1130.4	1121.5	1112.9
19.5°	1117.3	1126.4	1135.6	1142.8	1144.7	1145.5	1142.5	1137.6	1125.7	1116.6	1107.4
20°	1112.1	1121.5	1130.9	1138.3	1140.5	1141.0	1138.1	1132.9	1120.5	1111.4	1102.0
20.5°	1106.7	1116.6	1126.2	1133.6	1135.8	1136.6	1133.4	1128.2	1115.8	1106.2	1096.3
21°	1101.2	1111.1	1121.3	1128.9	1131.4	1132.1	1128.7	1123.2	1110.4	1100.5	1090.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1084.0	1094.8	1105.4	1113.8	1116.1	1116.8	1113.4	1107.9	1094.1	1083.5	1072.8
23°	1078.0	1089.1	1100.0	1108.7	1110.9	1111.6	1108.2	1102.5	1088.4	1077.8	1066.7
23.5°	1071.8	1083.0	1094.6	1103.5	1105.7	1105.9	1102.7	1096.8	1082.7	1071.6	1060.0
24°	1065.4	1077.0	1088.9	1097.8	1100.0	1100.8	1097.0	1091.4	1076.8	1065.4	1053.8
24.5°	1059.0	1071.1	1083.0	1092.1	1094.6	1094.8	1091.4	1085.4	1070.9	1059.2	1047.1
25°	1052.3	1064.9	1076.8	1086.2	1088.6	1089.1	1085.4	1079.5	1064.4	1052.6	1040.5
25.5°	1045.7	1058.5	1070.9	1080.5	1083.0	1083.2	1079.5	1073.6	1058.0	1046.1	1033.3
26°	1039.0	1051.8	1064.4	1074.3	1077.0	1077.3	1073.6	1067.4	1051.6	1039.2	1026.4
26.5°	1032.3	1045.2	1058.3	1068.1	1070.9	1070.9	1067.2	1061.0	1044.9	1032.3	1019.2
27°	1025.1	1038.5	1051.6	1062.0	1064.4	1064.7	1060.7	1054.5	1038.2	1025.6	1012.1
27.5°	1018.0	1031.6	1045.2	1055.8	1058.0	1058.3	1054.3	1047.9	1031.6	1018.5	1004.6
28°	1010.6	1024.7	1038.5	1049.1	1051.8	1052.1	1047.9	1041.2	1024.9	1011.3	997.0
28.5°	1003.2	1017.2	1031.3	1042.4	1045.2	1045.2	1041.2	1034.3	1017.7	1004.1	989.6
29°	995.7	1010.1	1024.2	1035.5	1038.5	1038.2	1034.0	1027.6	1010.3	996.5	982.2
29.5°	988.1	1002.7	1017.2	1028.9	1031.6	1031.3	1027.1	1020.7	1003.2	989.1	974.0
30°	980.4	995.5	1010.1	1021.9	1024.4	1024.4	1020.0	1013.3	995.7	981.4	965.8
30.5°	972.5	987.8	1002.7	1014.8	1017.5	1016.7	1012.8	1006.1	988.3	973.8	958.2
31°	964.6	980.2	995.2	1007.1	1010.1	1009.6	1005.1	998.7	980.4	965.8	950.0
31.5°	956.2	972.3	987.6	999.9	1002.7	1002.2	997.7	991.3	972.5	957.7	941.6
32°	948.1	964.4	979.9	992.5	995.2	994.8	990.3	983.6	964.6	949.8	933.5
32.5°	939.7	956.0	972.0	984.9	987.3	986.8	982.6	976.0	956.7	941.4	924.6
33°	931.3	947.8	964.1	977.0	979.9	978.9	975.0	968.1	948.8	933.2	916.2
33.5°	922.9	939.4	956.0	969.3	972.0	971.0	967.1	959.9	940.4	924.8	907.3
34°	914.2	931.3	948.1	961.2	964.1	963.4	958.7	952.0	932.0	915.9	898.9
34.5°	905.3	922.6	939.7	953.2	956.0	955.0	950.3	943.6	923.6	907.3	889.5
35°	896.4	914.0	931.0	944.6	947.8	946.8	941.9	935.0	914.9	898.4	880.4
35.5°	887.0	905.1	922.4	936.4	939.2	938.4	933.5	926.6	906.1	889.3	870.5
36°	878.1	896.2	913.7	927.5	930.8	929.8	924.6	917.9	896.7	879.6	860.8
36.5°	868.5	887.0	904.8	918.9	922.1	920.9	915.7	908.8	887.0	869.7	850.7
37°	858.9	877.6	895.7	909.8	912.7	911.5	906.3	899.4	877.4	859.8	840.1
37.5°	848.5	867.5	885.8	900.1	903.1	901.9	896.9	889.7	867.0	849.0	827.2
38°	838.1	857.4	875.7	890.5	893.2	892.0	887.0	879.6	855.9	837.1	813.9
38.5°	826.2	846.0	865.3	880.1	882.8	881.3	875.7	869.0	844.5	824.3	799.8
39°	813.4	833.4	853.9	869.7	871.7	869.7	863.3	857.4	832.4	810.7	785.5
39.5°	799.3	819.6	841.1	858.4	860.3	856.9	850.2	844.8	819.6	796.8	770.4
40°	783.5	805.0	827.2	846.3	848.0	843.3	836.9	831.2	806.5	782.0	755.1
40.5°	766.0	790.2	813.1	833.4	834.6	829.7	822.8	817.3	791.9	766.9	739.0
41°	748.9	774.9	798.6	819.6	820.8	815.4	808.7	803.0	776.6	751.6	723.0
41.5°	731.6	759.0	783.3	805.0	806.0	801.0	794.6	787.9	759.8	735.6	706.4
42°	714.1	742.2	768.2	789.2	790.2	786.2	780.3	772.6	743.2	719.3	689.4
42.5°	696.8	725.4	752.1	772.9	774.4	771.4	765.5	757.3	725.2	702.5	671.6
43°	679.7	708.4	735.8	756.3	757.8	756.1	750.1	740.5	706.7	684.9	653.8
43.5°	662.2	690.8	719.0	738.8	740.5	740.3	734.3	724.2	687.9	666.9	635.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	610.0	637.2	665.4	682.4	685.4	690.8	685.7	671.8	631.0	611.5	581.6
45.5°	592.5	618.9	646.4	662.2	666.1	673.8	668.4	654.3	612.3	592.5	563.6
46°	574.7	601.2	627.8	642.7	646.9	656.0	651.3	635.5	593.5	572.7	545.6
46.5°	556.7	582.9	608.6	623.1	627.6	638.5	634.3	617.7	574.5	553.2	527.3
47°	538.1	564.8	589.5	603.1	607.8	619.9	616.2	598.4	556.4	533.7	509.5
47.5°	519.6	546.8	570.3	582.9	588.8	601.6	598.7	579.7	538.1	514.4	491.2
48°	501.3	528.5	550.0	563.3	570.0	583.1	580.2	560.9	519.9	495.2	473.4
48.5°	482.8	510.0	530.2	543.8	551.2	564.6	562.4	543.6	501.6	475.4	455.6
49°	464.8	492.2	510.2	524.6	532.2	545.8	543.6	524.1	483.3	456.4	437.6
49.5°	446.7	473.9	490.7	505.3	513.4	526.8	525.5	505.5	465.0	437.3	419.5
50°	429.2	455.4	470.9	486.8	495.2	507.5	506.5	487.0	447.0	419.1	401.5
50.5°	411.4	436.8	451.4	467.2	476.6	488.5	487.7	469.0	428.9	400.3	383.2
51°	394.3	418.1	431.7	448.7	458.1	469.5	468.2	451.2	411.6	382.5	365.7
51.5°	376.8	400.0	412.9	429.9	439.8	450.7	450.2	433.4	393.6	364.7	348.1
52°	360.0	381.5	394.3	411.9	421.8	431.7	431.2	415.6	376.1	347.4	330.6
52.5°	343.4	363.7	376.3	392.9	403.5	413.1	412.4	397.6	359.0	330.3	313.3
53°	326.9	345.9	357.8	375.8	385.7	394.6	393.8	380.3	342.0	313.8	296.3
53.5°	310.3	328.4	340.0	358.0	368.2	376.3	375.6	363.0	324.9	297.2	279.7
54°	294.0	310.6	322.7	340.5	350.6	358.3	357.0	345.9	308.4	281.7	263.6
54.5°	278.2	293.3	305.6	322.4	333.1	340.2	339.0	328.9	292.3	266.8	248.1
55°	262.9	276.7	289.1	306.4	316.5	322.7	321.5	312.3	276.0	251.0	232.5
55.5°	247.6	259.9	272.5	290.1	300.0	305.4	303.4	295.5	260.2	235.7	218.4
56°	232.5	244.1	256.7	273.5	283.2	288.3	286.1	279.7	244.6	221.9	204.1
56.5°	217.7	228.6	241.2	257.0	266.8	271.3	269.3	263.1	230.0	208.0	190.0
57°	203.3	213.0	226.1	242.4	251.0	255.2	253.0	247.6	215.7	194.5	175.7
57.5°	189.3	198.2	211.3	227.1	235.7	239.2	237.0	232.5	201.4	180.6	162.6
58°	175.2	183.8	196.4	212.2	220.9	223.9	221.9	217.7	186.8	166.8	149.7
58.5°	162.1	170.0	182.3	197.9	206.1	208.5	206.6	202.6	172.5	154.4	137.6
59°	148.7	156.9	169.0	184.1	191.2	193.2	191.5	187.5	159.1	141.6	126.0
59.5°	136.4	144.0	155.9	170.7	176.7	177.9	176.4	172.7	146.8	130.0	114.9
60°	124.0	131.4	143.1	157.6	162.6	164.1	162.3	159.1	134.2	118.4	104.3
60.5°	112.7	119.8	130.7	145.3	149.5	150.5	149.0	145.8	122.1	107.5	93.6
61°	101.3	108.2	119.3	132.7	136.4	137.4	135.6	132.4	110.4	96.6	84.0
61.5°	90.7	97.6	108.0	120.8	123.8	124.5	123.0	120.1	99.8	86.7	75.1
62°	81.5	87.2	97.4	109.7	111.7	112.4	111.2	108.0	88.7	76.8	66.0
62.5°	72.6	78.8	87.2	98.6	99.8	100.8	99.6	95.9	78.6	67.7	57.8
63°	63.5	70.4	78.8	88.2	88.7	89.7	88.5	84.5	68.7	59.1	50.2
63.5°	54.6	62.0	70.4	79.1	78.1	79.1	77.8	74.1	59.5	51.1	43.2
64°	45.7	53.6	62.0	69.9	67.9	68.9	68.2	64.2	50.9	43.5	36.6
64.5°	38.5	45.5	53.6	61.0	58.3	59.5	58.8	54.9	43.0	36.6	30.6
65°	32.1	38.5	45.2	51.9	49.7	50.9	50.2	46.2	35.3	31.6	26.2
65.5°	26.7	32.4	38.3	43.0	41.5	42.5	42.0	38.5	29.6	26.4	22.0
66°	21.7	26.4	31.9	35.6	34.1	35.1	34.6	32.9	24.2	21.2	17.8



TEST NUMBER: P775941

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	10.6	13.1	16.6	17.5	18.5	19.3	18.8	16.3	7.4	8.2	6.7
68°	8.9	9.9	12.6	13.1	13.3	13.8	13.3	10.9	4.4	5.7	4.7
68.5°	7.4	7.9	9.1	9.6	8.4	8.6	8.2	7.4	3.0	3.7	3.5
69°	5.7	6.2	7.4	7.9	5.7	5.9	5.4	4.9	2.7	3.0	2.7
69.5°	4.2	4.4	5.9	6.2	4.0	4.0	3.7	3.5	2.7	2.7	2.7
70°	2.5	2.7	4.2	4.2	2.7	2.7	2.7	2.7	2.5	2.5	2.5
70.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
71°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
71.5°	2.2	2.2	2.2	2.5	2.2	2.2	2.5	2.5	2.5	2.5	2.5
72°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
73°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
73.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.0	2.2
74°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
74.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.0	1.7	1.7	1.7
76°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
76.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
77°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.5	1.5	1.7
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
78°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
78.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.5
79°	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.2
79.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.0	1.0	1.2
80.5°	1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.0	1.0	1.2
81°	1.0	1.0	1.2	1.2	1.2	1.2	1.2	1.0	1.0	1.0	1.0
81.5°	1.0	1.0	1.0	1.2	1.0	1.0	1.0	1.0	0.7	0.7	1.0
82°	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	1.0
82.5°	0.7	0.7	1.0	1.0	1.0	1.0	1.0	0.7	0.5	0.7	0.7
83°	0.7	0.7	1.0	1.0	1.0	1.0	1.0	0.7	0.5	0.5	0.7
83.5°	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.7
84°	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.5	0.2	0.2	0.5
84.5°	0.2	0.5	0.7	0.7	0.7	0.7	0.7	0.5	0.2	0.2	0.5
85°	0.2	0.5	0.5	0.7	0.5	0.7	0.5	0.5	0.2	0.2	0.5
85.5°	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.2	0.0	0.2	0.5
86°	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.2	0.0	0.2	0.2
86.5°	0.0	0.2	0.5	0.5	0.2	0.5	0.5	0.2	0.0	0.2	0.2
87°	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.2
87.5°	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
88°	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775941

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775941

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1218.1	1218.1	1218.1	1218.1	1218.1	1218.1
0.5°	1217.4	1217.4	1217.9	1217.6	1217.1	1217.9
1°	1216.6	1216.6	1217.1	1216.9	1216.6	1217.6
1.5°	1215.6	1215.6	1216.1	1216.1	1215.9	1217.1
2°	1214.9	1214.7	1214.9	1215.2	1214.7	1216.6
2.5°	1213.9	1213.4	1213.9	1213.7	1213.7	1215.6
3°	1212.7	1212.2	1212.4	1212.4	1212.7	1214.9
3.5°	1211.2	1211.0	1211.0	1211.2	1211.4	1213.9
4°	1209.7	1209.5	1209.5	1209.7	1210.2	1213.2
4.5°	1208.0	1207.7	1207.7	1208.0	1208.7	1211.9
5°	1206.3	1205.8	1205.8	1206.3	1207.0	1210.7
5.5°	1204.5	1204.0	1203.8	1204.3	1205.5	1209.2
6°	1202.6	1201.8	1201.6	1202.6	1203.5	1207.5
6.5°	1200.6	1199.8	1199.3	1200.3	1201.6	1205.8
7°	1198.4	1197.6	1197.4	1198.1	1199.6	1204.3
7.5°	1195.9	1195.1	1194.9	1195.6	1197.6	1202.3
8°	1193.4	1192.4	1192.4	1192.9	1195.1	1200.3
8.5°	1190.7	1190.0	1189.7	1190.4	1192.4	1198.1
9°	1188.0	1187.0	1186.7	1187.7	1189.7	1195.6
9.5°	1185.3	1184.0	1183.8	1184.8	1187.0	1193.2
10°	1182.3	1181.1	1180.6	1181.8	1184.0	1190.7
10.5°	1179.1	1178.1	1177.6	1178.8	1181.3	1188.0
11°	1175.9	1174.9	1174.4	1175.6	1177.8	1185.3
11.5°	1172.4	1171.2	1170.9	1171.9	1174.6	1182.5
12°	1168.9	1167.7	1167.2	1168.5	1171.4	1179.1
12.5°	1165.5	1164.0	1163.5	1164.7	1167.7	1176.1
13°	1161.5	1160.1	1159.3	1161.0	1164.0	1172.7
13.5°	1157.6	1156.1	1155.4	1157.1	1160.3	1169.4
14°	1153.6	1151.9	1151.4	1153.1	1156.3	1165.7
14.5°	1149.4	1147.7	1147.0	1148.9	1152.4	1162.0
15°	1145.0	1143.0	1142.5	1144.2	1147.9	1158.1
15.5°	1140.5	1138.6	1138.1	1139.8	1143.5	1154.1
16°	1135.8	1133.9	1133.6	1135.3	1139.1	1149.9
16.5°	1131.4	1129.2	1128.7	1130.7	1134.4	1145.7
17°	1126.4	1124.0	1123.5	1125.7	1129.7	1141.5
17.5°	1121.5	1119.0	1118.5	1120.8	1124.7	1136.8
18°	1116.3	1113.8	1113.4	1115.3	1120.0	1131.9
18.5°	1110.9	1108.4	1107.9	1110.1	1114.8	1127.2
19°	1105.7	1103.0	1102.2	1104.7	1109.2	1122.2
19.5°	1100.0	1097.3	1096.8	1099.0	1104.0	1117.3
20°	1094.3	1091.6	1091.1	1093.3	1098.8	1112.1
20.5°	1088.6	1085.7	1084.9	1087.4	1092.8	1106.7
21°	1082.7	1079.5	1079.0	1081.5	1086.9	1101.2

TEST NUMBER: P775941

CATALOG NUMBER: HCDJBLS1525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1063.9	1061.0	1060.0	1062.5	1068.9	1084.0
23°	1057.5	1054.5	1053.6	1056.3	1062.2	1078.0
23.5°	1050.8	1047.6	1046.9	1049.6	1055.5	1071.8
24°	1044.2	1040.7	1039.7	1042.9	1049.1	1065.4
24.5°	1037.3	1033.8	1032.8	1035.8	1042.4	1059.0
25°	1030.3	1026.9	1025.9	1028.9	1035.8	1052.3
25.5°	1023.2	1019.5	1018.5	1021.4	1028.6	1045.7
26°	1016.0	1012.1	1011.1	1014.3	1021.4	1039.0
26.5°	1008.3	1004.6	1003.6	1007.1	1014.0	1032.3
27°	1001.2	997.0	996.2	999.4	1006.6	1025.1
27.5°	993.3	989.3	988.3	991.8	999.2	1018.0
28°	985.6	981.2	980.4	983.9	991.5	1010.6
28.5°	977.7	973.5	972.5	976.2	983.6	1003.2
29°	969.8	965.6	964.4	968.1	976.0	995.7
29.5°	961.4	957.4	956.2	960.2	968.1	988.1
30°	953.5	948.8	948.1	951.8	960.2	980.4
30.5°	944.8	940.6	939.4	943.6	951.8	972.5
31°	936.4	932.0	930.8	934.7	943.4	964.6
31.5°	928.0	923.6	922.1	926.6	935.2	956.2
32°	919.4	914.7	913.2	918.2	926.8	948.1
32.5°	910.5	906.1	904.8	909.3	918.4	939.7
33°	901.4	897.2	895.9	900.1	909.5	931.3
33.5°	892.5	888.0	886.8	891.5	900.4	922.9
34°	883.3	878.6	877.6	882.6	891.5	914.2
34.5°	874.2	869.5	868.2	873.2	882.6	905.3
35°	864.5	859.8	858.9	863.6	872.9	896.4
35.5°	854.4	850.2	849.2	854.2	864.0	887.0
36°	844.5	839.8	839.1	844.5	854.4	878.1
36.5°	833.9	829.2	828.7	834.4	844.0	868.5
37°	822.3	818.1	817.8	823.3	833.7	858.9
37.5°	808.7	805.2	805.7	812.4	823.3	848.5
38°	794.1	790.9	791.7	799.1	810.2	838.1
38.5°	779.1	775.1	776.8	784.5	796.3	826.2
39°	762.7	759.3	761.3	769.4	782.0	813.4
39.5°	745.9	742.5	745.0	753.4	766.7	799.3
40°	728.9	725.2	727.9	736.8	750.6	783.5
40.5°	711.6	707.4	710.4	720.0	733.3	766.0
41°	694.8	689.9	693.1	703.2	715.8	748.9
41.5°	677.7	671.6	675.0	685.4	697.3	731.6
42°	660.7	654.8	657.2	667.9	679.2	714.1
42.5°	644.1	637.0	639.2	650.1	660.9	696.8
43°	627.3	619.9	620.7	631.8	641.9	679.7
43.5°	610.8	601.6	602.1	613.3	623.4	662.2



TEST NUMBER: P775941

CATALOG NUMBER: HCDJBLS1525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	559.4	549.8	546.3	556.2	568.8	610.0
45.5°	541.9	532.0	527.8	537.2	550.3	592.5
46°	524.1	514.9	510.2	518.1	532.5	574.7
46.5°	505.8	496.6	491.9	499.1	514.4	556.7
47°	488.0	479.8	473.9	480.1	496.6	538.1
47.5°	470.2	461.6	455.6	461.3	478.4	519.6
48°	452.2	445.0	438.6	442.8	460.6	501.3
48.5°	434.6	427.2	420.5	424.0	442.8	482.8
49°	417.3	410.4	403.5	406.2	425.2	464.8
49.5°	399.8	393.6	385.9	388.4	407.7	446.7
50°	382.5	376.8	368.9	370.6	390.1	429.2
50.5°	366.2	360.2	351.8	353.3	373.1	411.4
51°	349.6	343.7	335.5	336.8	356.3	394.3
51.5°	333.1	327.9	319.0	320.2	339.2	376.8
52°	316.5	312.1	303.2	304.2	323.2	360.0
52.5°	300.9	296.5	287.1	288.1	306.9	343.4
53°	284.9	280.7	272.0	273.0	291.1	326.9
53.5°	269.1	265.6	256.5	258.2	275.3	310.3
54°	253.5	250.5	241.9	243.4	259.9	294.0
54.5°	238.9	236.2	227.8	229.3	244.9	278.2
55°	224.6	222.1	214.0	215.7	230.5	262.9
55.5°	210.5	207.8	200.6	202.4	216.0	247.6
56°	196.4	194.0	187.3	189.5	201.9	232.5
56.5°	182.3	180.6	174.4	176.9	188.0	217.7
57°	168.3	167.5	162.3	164.6	175.2	203.3
57.5°	155.4	154.9	150.5	152.7	162.1	189.3
58°	142.6	142.3	139.1	141.6	150.0	175.2
58.5°	130.2	130.5	128.2	130.7	137.6	162.1
59°	118.4	119.1	117.6	120.1	126.5	148.7
59.5°	107.0	108.2	107.7	110.0	115.6	136.4
60°	96.4	97.8	98.1	100.6	105.3	124.0
60.5°	86.2	87.2	88.7	90.9	94.9	112.7
61°	76.6	78.8	80.8	83.3	85.2	101.3
61.5°	67.2	70.7	72.9	75.4	77.1	90.7
62°	58.6	62.3	65.0	67.5	68.7	81.5
62.5°	50.9	53.9	57.1	59.5	60.3	72.6
63°	43.5	45.7	49.2	51.6	52.1	63.5
63.5°	36.8	38.8	42.5	45.0	45.0	54.6
64°	30.6	32.6	36.3	38.8	38.5	45.7
64.5°	26.4	27.2	30.6	32.9	32.1	38.5
65°	22.5	22.2	25.7	27.4	26.9	32.1
65.5°	18.3	18.0	21.0	22.5	22.0	26.7
66°	14.3	14.3	16.6	18.3	17.5	21.7



TEST NUMBER: P775941

CATALOG NUMBER: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	5.7	7.2	7.9	7.9	7.9	10.6
68°	4.2	5.7	6.2	6.7	5.7	8.9
68.5°	3.2	4.2	4.4	5.2	5.2	7.4
69°	2.7	2.7	2.7	4.0	4.4	5.7
69.5°	2.7	2.7	2.5	2.7	3.7	4.2
70°	2.5	2.5	2.5	2.5	3.0	2.5
70.5°	2.5	2.5	2.5	2.5	2.5	2.5
71°	2.5	2.5	2.5	2.5	2.2	2.5
71.5°	2.2	2.2	2.2	2.2	2.2	2.2
72°	2.2	2.2	2.2	2.2	2.2	2.2
72.5°	2.2	2.2	2.2	2.2	2.2	2.2
73°	2.2	2.2	2.2	2.2	2.0	2.2
73.5°	2.0	2.0	2.0	2.0	2.0	2.0
74°	2.0	2.0	2.0	2.0	2.0	2.0
74.5°	2.0	2.0	2.0	2.0	2.0	2.0
75°	2.0	2.0	2.0	2.0	1.7	2.0
75.5°	1.7	1.7	1.7	1.7	1.7	1.7
76°	1.7	1.7	1.7	1.7	1.7	1.7
76.5°	1.7	1.7	1.7	1.7	1.7	1.7
77°	1.7	1.7	1.7	1.7	1.5	1.7
77.5°	1.5	1.5	1.5	1.5	1.5	1.5
78°	1.5	1.5	1.5	1.5	1.5	1.5
78.5°	1.5	1.5	1.5	1.5	1.2	1.5
79°	1.5	1.5	1.5	1.2	1.2	1.2
79.5°	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.0	1.2
80.5°	1.2	1.2	1.2	1.2	1.0	1.0
81°	1.0	1.2	1.2	1.0	1.0	1.0
81.5°	1.0	1.0	1.0	1.0	0.7	1.0
82°	1.0	1.0	1.0	1.0	0.7	0.7
82.5°	1.0	1.0	1.0	0.7	0.7	0.7
83°	0.7	0.7	0.7	0.7	0.5	0.7
83.5°	0.7	0.7	0.7	0.7	0.5	0.5
84°	0.7	0.7	0.7	0.7	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.2	0.2
85°	0.5	0.5	0.5	0.5	0.2	0.2
85.5°	0.5	0.5	0.5	0.5	0.2	0.2
86°	0.2	0.2	0.2	0.2	0.2	0.2
86.5°	0.2	0.2	0.2	0.2	0.2	0.0
87°	0.2	0.2	0.2	0.2	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775941
CATALOG NUMBER: HCDJBL51525CSD-HCD41TRMB-2500lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	1095.6	1105.9	1116.3	1124.0	1126.2	1126.9	1123.5	1118.3	1105.2	1095.1	1084.9
22°	1089.9	1100.5	1110.9	1119.0	1121.3	1121.8	1118.8	1113.4	1099.5	1089.6	1079.0



44°	645.1	673.3	701.5	720.2	723.0	724.2	718.5	707.2	669.1	648.6	618.0
44.5°	627.6	655.0	683.2	701.5	703.9	707.9	702.7	690.6	649.8	630.3	599.9



66.5°	17.3	21.5	26.2	28.9	28.9	29.9	29.2	27.4	18.5	16.3	13.3
67°	13.8	17.0	21.0	22.7	23.7	24.5	24.0	21.7	13.1	11.1	9.1



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	1076.5	1073.6	1072.6	1075.3	1080.7	1095.6
22°	1070.4	1067.4	1066.4	1068.9	1074.8	1089.9



44°	593.5	584.6	583.4	594.2	605.1	645.1
44.5°	576.7	566.8	564.8	575.2	587.1	627.6



66.5°	10.4	11.4	12.8	14.3	13.6	17.3
67°	7.9	8.6	9.6	10.9	10.6	13.8

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Peachtree City, GA 30269

Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)